Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_

**Notes Questions for the Unit 1, Part 3 Notes – The Importance of Genetic Variation as Fuel for Natural Selection**

Mrs. Krouse, AP Biology, 2015-2016

***Vocabulary:*** *For each of the terms listed below, fill in the definition given in the notes in the second column. There may be two alternate definitions in the notes, so you can choose one or record both of them. In the third column, rewrite the definition of the term in your own words or find an alternate definition from another source. If you do find a definition from another source, please identify the source in parentheses below your definition. As crazy as this sounds, I’m okay with you using Wikipedia! In the fourth column, I may provide you with a memory trick and/or ask you to break down a term into its parts to better understand its meaning.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Vocabulary Term and Synonyms** | **Definition(s) Given in the Notes** | **Definition in Your Own Words or From Another Source** | **Memory Trick and / or** **Breaking down the Word** |
| DNA (deoxyribonucleic acid) |  |  | N/A |
| Gene |  |  | N/A |
| Allele |  |  | N/A |
| Genotype |  |  | N/A |
| Phenotype |  |  | **Breaking Down the Word:** Look up the meaning of “pheno” and “type.” How does this help clarify the meaning of the term? |
| Protein |  |  | N/A |
| DNA Replication |  |  | N/A |
| Mutation |  |  | N/A |
| Genetic Variation |  |  | N/A |
| Crossing Over |  |  | N/A |
| Independent Assortment |  |  | **Breaking Down the Word:** How do “independent” and “assort” help clarify the meaning of this term? |
| Random Fertilization |  |  |  |

***Practice Questions:*** *Answer the following questions thoroughly and accurately in complete sentences.*

1. Explain the relationship between the following terms: genotype, phenotype, and protein.
2. Explain in your own words how the hemoglobin mutation results in a change in blood cell phenotype.
3. What is the only method for creating NEW gene forms?
4. What are the three methods for creating new combinations of old gene forms?
5. Why is genetic variation in a population a positive thing?
6. Explain why the following statement is incorrect: “Evolution creates new traits.”